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Notice of Allowability	Application No.	Applicant(s)	
	10/849,613	MAEDA ET AL	
	Examiner	Art Unit	
	Wasseem H. Hamdan	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/20/2005.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ The drawings filed on 21 June 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>5/20/04; 09/23/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Examiner's Statement Of Reason For Allowance

1. The following is an examiner's statement of reasons for allowance:

Claims 1-8 are allowed.

Regarding claim 1, the prior art of record does not teach all the combined components and or elements for a screen printing apparatus for printing on a board using cream solder through pattern holes of a mask plate by performing a squeegeeing operation in which the mask plate is laid on a board, including an inspecting means for inspecting a state of charging of the pattern holes with the cream solder and a state of transfer of the cream solder to the board by detecting states of the cream solder on the top surface of the mask plate and on a top surface of the board; and

a print parameter setting processing means for setting print parameters including the squeegee movement speed, the printing pressure, and a plate release speed to proper values on the basis of inspection results of the inspecting means that are obtained when the print parameters are varied according to prescribed parameter varying patterns that are set for the respective print parameters.

Regarding claim 3, the prior art of record does not teach all the combined components and or elements for screen printing apparatus for printing on aboard using cream solder through pattern holes of a mask plate by performing a squeegeeing operation in which the mask plate is laid on a board, including a print parameter setting processing means for setting print parameters including the squeegee movement speed, the printing pressure, and a plate release speed to

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proper values on the basis of inspection results of a state of charging of the pattern holes with the cream solder and a state of transfer of the cream solder to the board that are obtained when the print parameters are varied.

Regarding claim 5, the prior art of record does not teach all the combined steps for a screen printing method for printing on a board using cream solder through pattern holes of a mask plate by performing a squeegeeing operation in which the mask plate laid on a board and a squeegee is moved slidingly on the mask plate while the squeegee applies a constant printing pressure to the mask plate, including the third step in which plate release conditions for realizing a desired cream solder transfer state are set by performing asqueegeeing operation at the squeegee movement speed that was set at the first step and at the printing pressure that was set at the second step, and then performing plate separation operations of separating the board from the bottom surface of the mask plate while varying the plate release conditions according to prescribed varying patterns and inspecting a cream solder transfer state on the board under each set of plate release conditions.

Regarding claim 7, the prior art of record does not teach all the combined steps for a printing condition setting method for a screen printing apparatus which prints cream solder on a board through pattern holes of a mask plate by performing a squeegeeing operation, a squeegee is moved slidingly on a top surface of the mask plate while the squeegee is applying constant printing pressure to the mask plate, including a step of performing a squeegeeing operation at the squeegee movement speed that was set at the first step and at the printing pressure that was set at

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the second step, a step of performing plate separation operations of separating the board from the bottom surface of the mask plate while varying the plate release conditions according to prescribed varying patterns, and a step of inspecting a cream solder transfer state on the board under each set of plate release conditions.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of record does not teach all the combined elements, components and steps as discussed above in the "examiner's statement of reasons for allowance".

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wasseem H. Hamdan whose telephone number is (571) 272-2166. The examiner can normally be reached on M-F (first Friday off) 6:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wasseem H. Hamdan

May 10, 2005



Daniel J. Colilla
Primary Examiner
Art Unit 2854